

Letter from W. J. McGee to Alexander Graham Bell, May 28, 1903

SMITHSONIAN INSTITUTION Bureau of American Ethnology "M" WASHINGTON, May 28, 1903. My dear Dr Bell:

This is merely to recall and record the oral suggestion of volability, i. e., the conditional substantive corresponding to the actional substantive volation, which expresses action or power. So defined, volability may be regarded as an equation of three terms, viz: (1) weight, (2) wind surface (these two forming your "flying-weight"), and (3) size, or volume of structure. Thus, drawing illustrations from Nature, we may say that the bee is more volable (or possesses greater volability) than the bird, the hummingbird more volable than the eagle, and the condor less volable than any other known bird; which of course leads to the generalization that in Nature (ceteris paribus) volability varies inversely with size . Hitherto the same proposition has seemed true in the domain of the artificial; for this is precisely what Newcomb's article sought to demonstrate. But -

In your structures combining winged tetrahedra with intervening octahedra volability is either proportionate to, or increases with, size . In short, the tetrahedral principle 2 introduces a break or discontinuity in the evolution of mechanical construction no less complete than the discontinuities in the evolution of the universe accompanying the transitions from affinity to vitality to motility, and from motility to mentality.

While I have not formulated the matter, it seems to me that your specifications and claims should recognize the novel principle as well as its means and applications.

Yours sincerely, Dr Alexander Graham Bell, 1331 Connecticut Avenue, City.